of negroes, I believe that neither good midwifery nor a life of ease will prevent a protrusion at the umbilicus in children of the aboriginal inhabitants of tropical Africa.

"Although I have, while officiating as staff-surgeon, rejected a number of recruits on account of small ventral hernia, and also in consequence of slight protrusion at the umbilicus, in compliance with the regulations, I do not recollect having seen an instance of either class of blemishes who was on that account unfit for his majesty's service. The instructions issued on this subject directed that no recruit was to be approved who laboured under "hernia (of whatever kind.) or preternatural enlargement of the ring;" and, for many reasons, it would have been highly inexpedient for a staff-surgeon to be so far influenced by his own discretion or opinion as to commit a breach of the law. It will be recollected that the approval of a recruit by a staff-surgeon is not final, and consequently he must be in some measure guided in the execution of his duty, not by his own knowledge, experience, and discretion, but by his appreciation of the judgment and experience of the medical officer whose duty it is to decide finally upon the fitness or unfitness of a recruit for a regiment."

The following table exhibits a summary of Mr. Marshall's researches:

Recruits examined at	No. examin.	Total reject.	Ratio per 1000 reject.	No. rejected by hernia.	Millesimal ratio of rejections in consequence of hernia.		
Dublin depot,	42,740	10,279	240	920	21.5=1 in 11 of		No. reject.
Glasgow and Edinburgh,	9,528	2,375	248	69	7,1	1 in 34	do.
German Legion,	40,462	0	0	365	9		
France, mean three yrs.	126669	46,669	368	3,948	31.2	1 in 11.8	do.
Department of Seine,	26,083	11,148	427	834	31.9	1 in 13.3	do.

"The above summary presents several very remarkable results, one of which is, that the ratio of rejections on account of hernia in Dublin is three times that of Glasgow and Edinburgh. Hernia appears to be 50 per cent. higher among conscripts in France than among recruits examined in Dublin. The uniformity of the ratio of rejections for hernia among conscripts in France for three years, (31.2), and in the department of the Seine for a period of eleven years, (31.9), is sufficiently remarkable. The much higher ratio of rejections for disabilities in general among the conscripts in France, than among the recruits examined for the periods specified in Dublin and Scotland, is also calculated to excite attention."

ANIMAL CHEMISTRY.

71. *Urea in Dropsical Fluids*—R. Marchand has detected urea in the fluid contained in the peritoneal cavity in three cases of ascites. In the first he found 0.42, in the second 0.68, in the third 0.50 per cent.; and it appears probable that there was much more, because the quantity of albumen in the same fluid rendered it difficult to prevent the urea being entangled in the coagulated masses produced by the agents used in extracting it. In all the cases very little urine was secreted; and in two of them there was the disease of the kidney described by Dr. Bright. He mentions, also, that two cases are given by Nysten, (*Journal de Chimie Médicale*, 1837,) in which he found urea and uric acid, phos-

phoric acid, and several other constituents of the urine, in the fluid vomited by women labouring under ischuria renalis.—*Müller's Archiv.* 1837, part 4.

These cases, with those of Prevost and Dumas, (*Bibliothèque Univers.* xviii. 208,) who detected a considerable proportion of urea in the blood of dogs from whom the kidneys had been removed, by experiments which were confirmed by Vauquelin and Segalas, and by Mitscherlich, Tiedemann, and Gmelin, (Tiedemann's *Zeitschrift*, vol. i.) sufficiently prove that the excrementitious matter of the urine is not elaborated by the kidney, but merely separated in that organ from the blood, in which it had before existed ready formed.—*London Medical Gazette*, July, 1838.

72. *Analysis of Human Lymph.*—Marchand and Colberg having met with one of those rare cases in which pure human lymph admits of being collected in sufficient quantity for chemical examination, have communicated the results of their analysis in the last number of Müller's Archiv. (No. 2, 1838.) The lymph was collected from a wound on the back of the foot, which obstinately refused to heal, a case exactly similar to that observed by Müller. (Physiologie, vol. i. p. 214.)

The specific gravity of this lymph was 1.307: after resting a short time in a glass vessel, a web-like fibrinous coagulation formed, which when filtered, washed with ether, and dried, weighed 0.52 per cent. of the whole quantity. The fluid part gave a precipitate with alcohol, and bichloride of mercury, in the form of delicate floceuli. It was strongly alkaline. When dried in a water-bath at 97.5 Centigr. the lymph entirely coagulated from the albumen which it contained; heated to 100°, and kept for some time at that temperature, it formed a firm, powdery, gray mass, amounting to 3.074 per cent. of its weight, which when washed with ether, lost about 1-20th of its weight by the removal of that quantity of fatty matter. When the mass thus freed from fat was treated with boiling water, about one per cent. of albumen and fibrin were left undissolved; and the fluid being evaporated, left one and a-half per cent. of saline constituents.

They give, as the general result of their analysis of several portions of lymph, of which they could collect about a grain and a half in 12 hours—

Water	96.926
Fibrin	0.520
Albumen	0.434
Osmazone (and loss)	0.312
Oily and Crystalline Fat	0.264
Muriate of Soda	
—— Potass	
Alkaline Carbonates	
—— Lactates	1.544
Sulphate of Lime	
Phosphate of Lime and Iron	
	100.000

Ibid.

73. *Formation of Artificial Serum.*—M. Denis is led, by some experiments which he has made lately, to regard the fibrin as identical with albumen, and as held in solution in the blood, during life, by the salts of the serum. He says, if some pure and well-washed fibrin be taken, and macerated for twenty-four or forty-eight hours, in water containing a neutral salt, as nitrate of potash, it dissolves. The new product resembles serum, or white of egg; it precipitates bi-chloride of mercury; alcohol reduces it into a curdy mass, and at 74° C. it coagulates like pure white of egg; but if the solution be much diluted with water, the fibrin will gradually reappear, with its original properties. If a little caustic soda be added to the saline solution of fibrin, it becomes permanent; and when diluted with a great deal of water, will deposit only a slight

cloud. But if the salts employed are not in too great quantity, the alkalized solution will coagulate by heat; will precipitate with alcohol and bi-chloride of mercury, and the new fluid, which may be called *artificial serum*, will act like white of egg, or natural serum.—*Lond. Med. Gazette*, July, 1838. From *Archives Générales*, February, 1838.

MISCELLANEOUS.

74. *Proposed Experiments on Digestion.*—A resolution was passed by the medical section of the British association for the advancement of Science at their late meeting at Newcastle, to apply for a grant of 200*l.* from the funds of the association for the purpose of taking to Great Britain and retaining there for one year, Alexis, mentioned by Dr. Beaumont in his work on digestion, for the purpose of making physiological and chemical researches on the subject of digestion. The committee proposed for the investigation were Drs. Thompson, Prout and Graham and Professor Owen.

75. *Vaccination—Cow-Pox.*—What is most surprising in vaccination is, the loss of its source, almost immediately after it was discovered. Since that period, all the researches made in England, Germany, Italy, and France, have proved unavailable; the source has not been found. Some vaccinators, it is true, have at different times thought that they have found it in the cow, and pretend to have inoculated children successfully with it; but at the end of the second and third inoculation it has always spread, [!] and, until 1831, no means had been found to preserve it and transmit it to France.

The 30th of June, 1833, the true cow-pox was discovered 26 leagues from Berlin. Dr. Brenner, after 30 transmissions, sent it to Dr. Kraux, counsellor for the Government at Dussoldorf, who inoculated with it successfully, but symptoms as intense as those noticed by Jenner were not observed; yet they are produced by the cow-pox lately discovered in France.

M. Maceroni thought he had found it in Rome in 1832, and he affirms that in 1834, he, with M. Marcurri, found it in the same drove, which enabled him to transmit it by inoculation to children, and it then served to inoculate others. Unfortunately, the researches were not continued, and nothing more has been said on the subject.

But it is extraordinary that in 1836, within the space of a few days, the cow-pox was supposed to be found in three different situations not far distant from each other; at Passy, Amiens, and Rambouillet: the results of these various observations have induced the supposition, that the pustules succeeding inoculation with the new vaccine, arrive later at a state of maturity. The ancient vaccination began to show near the eighth day; the pustules resulting from the new inoculation are but little advanced at this period, and the areola that begins to appear is not well marked till the eleventh or twelfth day; the pustule is then fully developed.

Without changing its character, the aureola is large, of a vivid colour; the sub-jacent tissue is effused; if there be three punctures there is nearly always fever, the axillary glands swell, become painful, and sometimes suppurate. It is then the pustules acquire a diameter of four to five lines; they are circular and prominent; from the thirteenth to the fourteenth day it dries up, and from the fifteenth to the eighteenth the whole surface is dry, the scab remains flat and large, and only falls off from the twenty-fifth to the thirtieth day. It is evident that this eruption has characters peculiarly its own, and only resembles the Jennerian vaccination during the first seven days.—*British and Foreign Medical Review*, September, 1837.